brain, but in still less proportion than even in the blood.—*Gazette des Hôpitaux*, February 19, 1853. T. R. B.

79. *Poisoning by Aconite.*—An inquest was held at Bristol, January 15, 1853, to inquire into the death of Emma Forty, an inmate of the Roman Catholic Convent of the Good Shepherd, situated at Arnos Vale, near that city. Deceased had, it appeared, on Monday the 10th administered to her by mistake, by the sister attendant, a deadly poison instead of the medicine prescribed for her, which resulted in her death five hours afterwards. It appeared from the evidence that the deceased was labouring under tape-worm, for which she was ordered, by the medical adviser of the convent, decoction of pomegranate bark and quinia. On going to the dispensary, she took the wrong bottle, and gave, instead of the decoction, a drachm of Fleming's tincture of aconite. Verdict accordingly.—*Medical Times and Gazette*, January 22, 1853. T. R. B.

80. *Hydrosulphocyanic Acid.*—(The history and presence of the acid become interesting, from the fact that some tests of it produce identical results when applied to meconic acid.) This acid does not occur in a free state, but only as sulphocyanide of sodium or potassium. It was discovered by Treviranus in the saliva, and has as yet been discovered in no other fluids. Treviranus named it hæmatic acid; and because he found that it formed blood-red solutions with the persalts of iron, he attributed the colour of the blood to sulphocyanide of iron.

For a very long time it has been disputed whether the ingredients in the saliva, which give rise to this red colour with the persalts of iron, is actually sulphocyanogen. There is scarcely any subject in the whole domain of zoochemistry in which so many experiments have been made with such contradictory results. We believe, however, that no one who repeats the experiments of Pettenkofer can entertain a doubt regarding the presence of sulphocyanogen in the saliva. Pettenkofer especially directs attention to two tests which he discovered for hydrosulphocyanic acid. Solutions of the acetate and formate of peroxide of iron are perfectly decolorized on boiling with alkaline chlorides, while this treatment has no apparent effect on sulphocyanide of iron; farther, it is known that the persalts of iron do not decompose ferridcyanide of potassium; but if we heat a solution of sulphocyanide of iron, hydrocyanic acid is developed, and there is a precipitate of Prussian blue. Pettenkofer applied this treatment to the alcoholic extract of the saliva, and thus ascertained the presence of sulphocyanogen. Other chemists had previously made use of a test that had been discovered for the sulphocyanides, viz. a mixture of two solutions of sulphate of protoxide of iron and sulphate of oxide of copper (when subsulphocyanide of copper is precipitated), with the view of detecting this substance in the saliva. The alcoholic extract of saliva is free from sulphuric acid (for the sulphates are insoluble in alcohol); hence, Pettenkofer thought that he might make a quantitative demonstration of the sulphocyanogen in the saliva, by oxidizing the alcoholic extract with chlorate of potash and hydrochloric acid, and precipitating the sulphuric acid that was formed by chloride of barium.

Sulphocyanogen is almost always in human saliva; it is, however, occasionally absent without any apparent physiological or pathological reason. It appears to be wanting in the secretion during salivation from any cause; at least, I could never detect it during the ptyalism following the use of mercury or iodine, or occurring in the course of typhus or other diseases.

Sulphocyanogen occurs also in the saliva of the dog and the sheep. I have examined the saliva of four horses without detecting any traces of it. Wright, however, asserts that it occurs in the saliva of that animal.

Considering the extremely small quantity in which it occurs, and that it is often absent without any apparent bad consequence, it seems hardly probable that the alkaline sulphocyanides take any definite part in the process of digestion.

I have noticed several healthy, vigorous young men, whose saliva contained no sulphocyanogen, and yet who enjoyed the best digestion.

It would be very easy to explain, by chemical formula, how sulphocyanogen might be formed from the histogenetic substances; but, unfortunately, we as yet possess no facts to confirm us in the establishment of any particular chemical equation; it is better, therefore, frankly to confess that we know absolutely nothing regarding the place or the mode in which sulphocyanogen is formed in the animal organism.—*Lehmann's Physiological Chemistry*, vol. i.

T. R. B.

81. *Phellandrium Aquaticum.*—The synonyme of this is Œnanthe phellandrium. Lindley (*Flora Medica*) observes on it: "Poisonous like the last (œnanthe crocata), but in a less degree." Alfred Taylor (*On Poisons*) says the same, and adds: "The poisonous principle is unknown."

It now appears that this principle has been discovered by M. Hutet, an apothecary at Lyons. He names it *phellandrine*, and procures it from the seeds, which contain an average of two or three per cent. of it. Seven and a half grains of it injected into the veins of a dog produced, in a few instants, difficulty of respiration, nervous tremblings, and anxiety, lasting some hours. He, however, recovered; but two birds, into whose beaks the same dose was introduced, died in fifteen or twenty minutes.—*New York Journal of Pharmacy*, April, 1853, from *Bulletin de Thérapeutique.* T. R. B.

82. *New Method of Analysis for the Detection of Organic Poisons.* By C. Flandin.—(The following is an extract from his *Memoir*):—

We are all aware of the facts respecting inorganic poisons. They are found (so to speak) everywhere—not only in the organs of the body where they have been taken or applied, whether internally or externally, but even in the most distant organs to which they have been carried by absorption. They are found not only in the dead body immediately after death, but ten years or more thereafter they can be traced in the remains of putrefaction and in the soil of graveyards.

Do the same facts hold as to organic poisons? In the concluding part of my *Treatise on Poisons*, now in the press, I have shown: 1. That poisons are substances that do not assimilate. 2. That they penetrate the organs by absorption. 3. That they act by *action de presence.*

If these principles be correct, it follows that all poisons may be found in those organs of the human body with which they have been placed in contact, or to which they have been carried by absorption.

A high authority in toxicology (Professor Christison) has made the following remark: "It may be laid down, therefore, as a general rule, that, in poisoning with opium, the medical jurist, by the *best methods of analysis* as yet known, will often fail in procuring satisfactory evidence, and sometimes fail to obtain any evidence at all of the existence of the poison in the contents of the stomach."

Now, these best methods of analysis, spoken of by Professor Christison, consist (not to go into too minute detail) in treating the suspected substances with acetic acid or alcohol, filtering the liquor, evaporating it to the consistence of an extract, dissolving this extract in pure or acidified water, decolorizing with animal charcoal, or precipitating (as the case may be) the animal matters with different reagents, as subacetate of lead, sulphydric acid, nitrate of silver, nut-galls, alcohol, &c., and when the active principle of opium (morphia) is to be sought for, to apply to it such tests as nitric acid and the perchloride of iron.

What are the results of these methods of analysis in cases of poisoning? Absolutely none. When an expert recently inquired of a celebrated French toxicologist, what mode he should pursue to detect vegetable poisons, the reply was, *all research is useless.* Yes, all research will be useless if we continue to pursue the present methods. They neither isolate the poison; they do not act on it directly by tests; and, therefore, they cannot prove its characteristic properties.

In examining this subject, particularly in reference to the nature of animal matters, I find they may be arranged into, 1. Proteic or albuminous matters.